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## ABSTRACT

The document presents an overview of a project to help elementary and secondary school educators evaluate affective aspects of educational programs. The document is presented in ten sections. Section I describes formation of the project by states in the Rocky Mountain area in 1970. Section II identifies project objectives. The major objective was to contribute toward humanization of education by helping schools identify affective priorities and measurement needs. Sections III and IV discuss state and local school district involvement with the project. Sections V and VI describe the search for measurement instruments and affective education literature. Section VII discusses project funding. Section VIII outlines development of test instruments and notes that sample test instruments were administered to over 5,000 students in three states during 1973. Section IX explains how tests were scored and evaluated for reliability of how project testing instruments were coordinated with data from cooperating schools. The final section traces the development of workshops to train state department of education personnel in the use of project materials. (DB)

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MEASUREMENT OF AFFECT  
AND THE  
HUMANIZING OF EDUCATION

PART 1  
BACKGROUND AND OVERVIEW  
OF THE PROJECT

Final Report of the Interstate Educational Resource Service Center  
Affective Education Project

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PART I  
FORWARD

The effectiveness of education in the affective domain has always been difficult to assess. This has been the case for at least two basic reasons: (1) lasting interpersonal relationships and the ability to live affectively are generally developed over a long period of time; (2) objectives are less well defined and affective behavior is tied to a value system upon which people from different social and religious backgrounds have a difficult time agreeing. This is not to say that schools should be less concerned about affective education; indeed, in a society that has greatly enlarged its capacity to build and use technology while its human values appear to be on the decline, affective education should receive increased attention.

But if education in the affective area is to be improved, educators must learn how to deal with the goals and objectives in that area and devise a system whereby results may be more precisely assessed. That is what the "Interstate Educational Resource Service Center" project has been all about. Working with schools to identify affective priorities and measurement needs, the search for instruments used in measuring progress in affective education, and the developmental validation of instruments to fill the gap where adequate instruments do not exist have consumed the major portion of the project's time.

At its inception, the Project encompassed the eight Rocky Mountain States. As federal funding became more of a problem and there were cutbacks in the project allocation, the original states were less able to be involved; budget commitments precluded allocation of state funds to the Project. In order to keep the Project alive, Utah committed a substantial amount of its own funds, believing strongly that the Project had much to offer the nation in the developing of affective programs.

In a philosophical and conceptual vein the Project has much in common with the current thrust in humanizing education. If affective programs are to have meaning some basic premises must pervade the public school system. The foundation of such a program is a concept in which profound respect for the student is exhibited by the way educators plan, organize, teach and behave. This presupposes that the schools are student centered and that concern for the student transcends administrative convenience. The humanizing of education requires that a relationship be developed among and between students, teachers, and administrators which creates an atmosphere in which each student feels wanted and important. There is a real need for creative and imaginative teachers who have a high estimate of the worth and dignity of each student in the school, and who exude confidence in and respect and love for every student regardless of the circumstances from whence they come. It is axiomatic that teachers also must feel good about themselves and the conditions under which they work if they are to positively influence their students.

Over the years the capacity of the nation to build and use technology has been greatly increased. But as a people we have not developed so well in our ability to relate to one another. Americans are often accused of having materialistic values at the expense of human values. In education we concentrate more on the teaching and learning of cognitive aspects than we do on the affective; and yet, a fundamental concept is that as an individual develops greater insight and acceptance of himself he concurrently develops a deeper understanding and acceptance of others. When one understands what brings out the best in himself, he can find ways to bring about the best in others; when he accepts the fact that he has weaknesses, he can empathize with those who have similar problems. As a person gains maturity he can live harmoniously among people with different beliefs, standards, and ideologies.

The prime objective of education is self-understanding. The final test is linked with what the student gets out of the system that helps him understand himself so that he can know not only what he is but what he may become.

If education is to be truly affective and humanized there are several things educators must consider and do:

1. Get on a person to person basis with each student. Teachers must have the capacity to love and to have high regard for the students they teach. They need to know that it is fully as easy to identify strengths as it is to identify weaknesses in students and that each student brings his own assets to school which need to be recognized and further developed.

2. Terminate the condition in which the school assumes the posture of an institution whose role is to sort and weed out students. The school's role is to provide a place where students succeed, not where they fail. Classification, where necessary, should be provided to enhance instruction, not to deprive students of full access to school programs.

3. Create a climate in which students have a role to play in what goes on in the school. The schools have the last clear chance of teaching the concept of democracy. Such a concept cannot be taught in a vacuum nor in an atmosphere of suspicion, of mistrust of students. The school should be a place where students not only see democracy in action but also where they can participate in it and experience it in the example set by school practice.

4. Provide an understanding that the role of the school is more than to impart academic knowledge and skills. Positive feelings and attitudes toward self and others are also important and constitute a viable part of any educational program. Failure in school reduces the self-concept and holding one's self in less than high esteem contributes to failure in school. That cycle needs to be broken.

5. Find the connection between the lesson being taught from the book and the lesson that should be learned in life. Relevancy may be an overworked word, but students who see no practical application in what is being taught see little need for the exercise.

6. Decrease polarization and categorization of people. Hard line opposites should be avoided in relationships between students and teachers. Instruction serves best if it is based on

rational principles rather than on prejudices and personal preferences. Educators should develop great sensitivity to the power of language in polarizing and condemning and should forsake its use when its effect is apparent or suspected.

7. Satisfy the education and training needs of those who seek schooling. Good schools, whose programs are based on identified needs of students, foster scholarly and adjusted behavior; poor schools seem to estrange youth and push them into deviant behavior.

All these things have to do with affective education. Establishing appropriate objectives, designing programs and activities to meet those objectives, and measuring the results are as necessary in the affective domain as in the cognitive. Hopefully, this project has demonstrated that this can be done.

Walter D. Talbot, Chairman  
IERSC Board of Directors and  
Utah State Superintendent  
of Public Instruction

PART 1  
BACKGROUND AND OVERVIEW  
OF THE PROJECT

In the late 1960's the states in the Rocky Mountain area were involved in several co-operative projects in education. Among these were the Western States Small Schools Project (WSSSP) funded by the Ford Foundation; Designing Education for the Future (DEF) Project and The Interstate Project for Program Planning and Consolidation (IPPPC) both funded by the US Office of Education; and the Project for Improving State Leadership in Education (ISLE), also funded by the US Office of Education.

As these projects were implemented and the personnel from the state departments of education began to work together, it became apparent that there were several advantages in working together. Since the population of states in this area is relatively small, they do not have extremely large staffs in their education departments, and such functions as in-service training, planning, evaluation, data processing, and research become an expensive and somewhat inefficient problem to handle. It was felt by the chief state school officers and their administrators responsible for functions of that type, that a co-operative effort between this group of states would result in a significantly greater capability to perform these functions.

DEVELOPMENT OF THE CENTER IDEA

Under the sponsorship of the Interstate Project for Program Planning and Consolidation, administered by the State of Colorado, a meeting was held with representatives of each state present to "brainstorm" and explore the possibilities of such cooperation. This meeting was in early April 1970. It was decided that an "Interstate Center" might be organized that would respond to State Education Agency needs and requests for services. Such a center would be governed by a board of directors comprised of the Chief State School Officer or his representative from each of the participating states. As directed by this board, the center was to

conduct such activities as: train SEA personnel, coordinate planning efforts, gather, process, and disseminate data, conduct research, maintain a central library and information service, and so on. A committee was formed to put the decisions of the day-long meeting into proposal form to be presented to the Chief State School Officers for their consideration. On April 20, 1970, a meeting of the Chief State School Officers was held in Nevada and the proposal was presented. Each state indicated interest in the idea, but there was some disagreement about how it should be funded, its objectives, and what priorities such a center might work on first, realizing they could not attempt several projects requested of them at one time without a large staff.

It was decided that each state superintendent would write-up what he would like to see such a center do. Superintendent Bernell Larsen of Nevada would then compile the common elements of each states desires and supply this information to the committee as input to a revision of the proposal. It was also decided that the revised proposal should be submitted to the US Office of Education requesting funds to support such a center. Representatives from some of the states felt the Board of Directors should be formed immediately and that the center idea could go ahead whether or not federal funding was available. Dr. Verl Snyder of the USOE who was present at the meeting agreed to assist in getting a proposal into the proper form to be considered by the USOE for possible funding. Dr. Snyder seemed optimistic about the possibility of funding, but said it would be at least July 1, 1970, before anything could be done because the fiscal 1970 monies were all committed.

#### BOARD FORMED AND PURPOSE DEFINED

On June 12, 1970, the Chief State School Officers met in Salt Lake City and organized the Board of Directors with Walter D. Talbot of Utah as Chairman and Dolores Colburg of Montana as Vice Chairman. The Executive Officer of the Board was to be the Director of the Center. Criteria were established for the selection of the Center Director and policy guideline for the operation of the center and procedures

to be followed by the Board of Directors were discussed.

Utah was given the responsibility to provide interim leadership for the project. Several months were required to make the revisions in the proposal necessary to reflect the desires of the member states and the US Office of Education. Candidates for the position of the Director of the Center were also searched out and interviewed during this period by a committee of the Board of Directors.

By November 12, 1970, when the Board met next, the mission and purpose of the Center had been spelled out in a proposed document which was an agenda item for approval at the meeting. This mission and purpose document was developed from Superintendent Bernell Larsen's summary of the letters from the Chief State School Officer's of all the member states. The last revision of the proposal was consistent with this mission and purpose document and was approved for funding by the US Office of Education. The four areas of work specified in the mission and purpose document and the proposal were: 1) Development of instruments for assessing, measuring and evaluating affective growth of students, 2) Development of training capability to assist state departments in training planners and evaluators, 3) Development of a systematic plan and implementation procedure for an information management system, and 4) Development of such other systems and programs as the Board of Directors may decide. The affective measurement was to be the priority project.

#### CENTER GETS UNDERWAY

After notification of the grant award by the US Office of Education in November, initial work was begun on the affective project by Dr. Brent Gubler, the acting director. He began to correspond with test companies and authors to identify resources and commercially available tests. The director was appointed February 1, 1971.

Colorado requested service from the center in identifying items for measurement of five affective areas which were included in their statewide accountability program. CTB/McGraw-Hill was

contacted as one resource which might be capable of responding to the request Colorado had made. This company outlined a procedure they would recommend and gave an initial estimate of the cost involved. Some experimentation with contracting was tried simultaneously in an effort to determine the feasibility of this route. A small (\$300) contract was negotiated with Dr. Grant Harrison and Norman Murray to demonstrate the use of their adaptation of the Thurstone Instrument in a technique that could be used to build an attitude scale on any subject.

Each state appointed a liaison person to work with the Interstate Center. This group met to discuss how the Center was to accomplish its work and how it might be responsive to the needs and interests of all member states within the framework of the mission and purpose document. Several possibilities were presented to accomplish the affective measurement, training, and information management work. The two basic directions discussed were building up a staff within the Center, or contracting pieces of work to outside agencies. It was decided that it would be wise to see what could be found in the way of affective measurement specialists who might be hired full time, since this was the priority area of interest. Everyone agreed the Center should look toward spending more of its budget for help in that area and that if qualified people could be found within the budget limitations, there would be ample work to keep them busy full time. If qualified personnel were not available the decision was to contract with individuals and commercial establishments to accomplish the work.

A search was undertaken to identify possible applicants in the area of test construction, scaling of instruments, and affective theory.

On May 10th Dr. Albert Wight joined the Interstate Center staff and immediately began the search of the literature and to plan with the liaison people from each member state how the affective measurement portion of the project might best be accomplished. It was agreed that work on measurement instruments could not begin

until the important objectives were identified in the affective area. Three supportive contracts were negotiated in order to move the affective project along as fast as possible and to establish a basis for the work. The first contract with John Sesne was a national survey of the fifty states and nine territories to determine what states were saying were the important goals and objectives of education. The second contract with Ron Sommerville was a search of the literature to find what the current thinking was regarding affective measurement, and to describe as best he could the "state of the art" in affective measurement. The third contract with Max Lewis was a similar literature search to describe the current thinking of authors about the affective domain and the implication for learning theory and classroom instruction.

#### LOCAL SCHOOLS TO BE INVOLVED

In working with the liaison representatives from each state, it was clear that no one state alone, or all together felt comfortable in trying to describe what specifically in the affective area ought to be measured or have measurement instruments developed for. The decision arrived at was for each state to nominate local districts who were interested in the affective area and hopefully already involved with it. The Interstate Center would then contact these districts to discuss the possibility of a mutually productive relationship. The idea was that these local districts might help the group of states identify the priority areas in the affective domain that public schools might legitimately include in curriculum and might welcome measurement support for. It was felt this might provide the most realistic input to answer the question, what shall we measure, and avoid the problem of the state departments coming up with something that would have to be sold to, or imposed on local districts. Considerable time and effort was expended in trying to find districts and schools that were representative of all the types of schools in the project states in terms of economic conditions, ethnic makeup, size, location - whether rural or urban, and readiness to make a major commitment to be involved in the affective project.

### INSTRUMENT SEARCH

A second strand of the affective measurement project following up the contract work accomplished by Ron Sommerville, was to determine what commercially prepared tests or other instruments developed for projects, dissertations, etc., might be available in the areas the schools said were important. It was felt that if good instruments already existed and could be identified and made available there would be no reason to develop new instruments. On November 1, 1971, James Doxsey was employed to pursue this work. Following the leads identified in the literature review, and developing correspondence with every source he could identify, Mr. Doxsey began to collect information about tests and samples of many tests. The work of collecting tests and descriptions of tests continued throughout the project with the number of instruments considered reaching into the thousands.

### PUBLICATIONS

By this time, the staff had read and discussed considerably the problem of what affect was and what goals seemed to be important to the schools, and had committed their thinking to writing in several monograph publications. These were titled: 1) Affective Goals of Education, 2) Beyond Behavioral Objectives, 3) Participative Education And The Inevitable Revolution, 4) Affective Priorities In Education, and 5) Toward A Definition Of Affect In Education. The first three and the fifth authored by Dr. Wight and the fourth by Dr. David T. Miles of Southern Illinois State University. These publications were extremely useful in helping the staff to crystalize their thinking, in helping local school districts staffs to get their thinking started along the same lines, and in communicating where the Interstate Center staff was to the state department people. Each publication was sent to each member state while still in draft form and critiques and suggestions were solicited from each state.

In the affective goals publication a conceptual model is suggested which divides the areas of affect into four main categories, i.e., self, others, man-made world, and natural world. Under each of these categories sub-divisions are suggested as a means of handling the various

activities and behaviors related to that category. (Described in Part 4) In collecting tests and descriptions of tests, the categories within this model were used to categorize the tests and a coding system was developed to make them more accessible.

#### HARD WORK OF LOCAL SCHOOLS

On May 3, 1972, the Board of Directors met and re-elected Dr. Walter D. Talbot as the chairman for the second year. Burnell Larson was elected as vice-chairman replacing Delores Colburg. They heard a report on the affective project indicating that progress was difficult since so much time and effort was required to bring local school staffs to a point where they could specify affective objectives as well as get commitment to working toward the changes that may be necessary to achieve them from staff, administration, parents and students.

The staff developed workshop materials and traveled from school to school in several states for a period of several months. The local school people were helped to identify reading materials and to work through problems they were able to identify. With each visit, a plan of action was established which these staffs agreed to follow until further assistance from the Interstate Center was needed again.

After working with many schools in all states that nominated districts, there were about 25 schools in eight of these districts who worked through the entire two-year period and who provided the descriptions of their affective goals and objectives. These schools all had several workshops with the Interstate Center staff either as individual schools or as groups of schools from a district. About 35 schools in 12 districts worked with the Center in the actual testing of the instruments.

#### CONTINUATION PROPOSAL

The second year of the project was to end in November of 1972. The Board met October 11, 1972 to consider the continuation proposal. It was determined that since severe cuts had been experienced and were likely to occur again with this continuation proposal, that the training and information management activities be dropped and that the entire effort be expended on the affective measurement portion of

the project. Dr. Robert Schrader, the Wyoming Superintendent, was elected to replace Burnell Larson of Nevada as vice-chairman of the Board of Directors at this meeting, as Dr. Larson had left that position in Nevada.

In November the Director of the project was notified that the continuation proposal had not been approved and that the project would terminate November 30, 1972. The reason given was that Title V monies had been taken from the Federal budget and projects that had already run two years had to be terminated.

The staff immediately requested extension of the time of the second year grant for one month to be funded with the few dollars of carryover funds for that project year. Each of the member states were asked to contact their congressional delegation if they felt the project merited this effort. This was done and the Chief State School Officers of each state contacted the Commissioner of Education and voiced their concern that the project was to be terminated. This was in contradiction of the U.S. Office of Education commitment to a three-year project. Each of the staff members wrote letters to the congressmen and to the U.S. Office of Education appealing for an opportunity to complete the project. It was felt by all that the affective area was too important to drop this half-developed potential to develop some measurement instruments. After considerable turmoil for all concerned, particularly the local schools in the several states and the Center staff, the U.S. Office agreed to provide a small amount in grant money, to allow the completion of the project. This was formally granted on February 20, 1973. The State of Utah agreed to provide one salary, office space, and accounting services to supplement the grant and make it possible to do a credible job in completing the project.

#### TEST CONSTRUCTION

As the goals and objectives of the cooperating local schools became more clear, an attempt was made to identify those which were of high priority that these schools had in common. This resulted in eight general priority areas being described.

A pool of test items related to these eight areas was then

generated by selecting items from the growing inventory of tests the Center had on hand. Commercial tests and other tests presently available which dealt with these areas were also selected for possible use.

Four Center staff members independently sorted test items from the pool into groups and gave each group a title. The groupings were then checked against each other to determine the extent of agreement. Differences were resolved through discussion among staff members. Since many affective constructs are interrelated and interdependent, many items would fit equally well in more than one group. These had to be arbitrarily assigned.

A list of adjectives and verbs from the words used in the test items was compiled. These words were given to groups of students of different age levels with the request that they indicate which ones they did not know the meaning of, and those which they would prefer to use in describing people they liked and those they would use to describe people they disliked. This gave an indication of which words might be useful and which might not be understood in test items. Items were modified or rewritten to exclude, in-so-far as possible, words which were difficult for fourth grade students.

The groups of items were categorized according to the conceptual framework spoken of earlier in an attempt to check what was developing from this grouping process against the literature and the theoretical development that the staff had done.

Some of the objectives the schools had identified were not adequately covered by the items found in the tests on hand. It was necessary to write test items to fill these gaps and provide coverage of these important goal or objective areas. It was also necessary to rewrite many of the items taken from existing tests to clarify them and to insert the words identified in word checks with students as words students used and understood.

Trial or experimental instruments were then put together and administered to small groups of students. Interviews were also conducted with small groups of students to get their reaction and feeling about these trial instrument items and the format used.

Revisions were made based upon this information and the revised instruments administered. About two months of trials and revisions were made before the final group of fourteen instruments that were to be administered to the total sample were arrived at.

In May, arrangements were made with all of the local schools and the total staff of the Interstate Center worked to test a sample of over 5,000 students in three states. Students in the sample were third to twelfth-graders and represented all types of schools, economic conditions, ethnic mixes, and philosophies.

Along with the development of student self-report instruments, two other types of instruments were developed and administered in this period from January to June of 1973. The first was a teacher attitude questionnaire. (TAQ) This instrument was designed to identify the philosophical position the teacher worked from and the type of classroom management exercised. It was felt that this information could be extremely useful to individual teachers and to a staff of teachers as they discussed conditions necessary to facilitate the achievement of the affective goals they had identified. The second was a teacher observation system. (TOS) The idea of this instrument was to help teachers associate specific observable behaviors with goals and objectives. Also, to make a statistical comparison of the teachers ratings of a particular student with the students' own ratings on the same variables possible. Teachers filled these in during May and the data was processed along with that from the student instruments.

#### ANALYSIS OF DATA

The next major problem was to settle on a firm research design. In January, 1973, Mr. Anthony Tseng was employed to work on this problem. This meant that four months of work had gone into such a design before the pattern of test administration was worked out enough to approximate a tentative research design. Mr. Tseng was a doctoral student and the pressures of his school work added to his responsibilities with the Interstate Center became too much for him to handle and he had to give up his work with the Center. This was in April and the computer programs were not yet determined. It was also not known exactly what

would be possible in the way of an appropriate sample to work with. Ronald Mathiesen replaced Tony Tseng in May and took responsibility for the further research design and computer work. The working out of the logic for data analysis, and assessment of the instruments was done in the early summer while the answer sheets were being cleaned up and the keypunching was being done. About one-half of the tests given were answered on standard answer sheets and were machine scored. The other half were answered directly on the test itself and were keypunched to get the data on data processing cards. This was done to determine whether students would answer one form better than the other, and also to find out whether processing the data was easier one way or the other.

Several girls were hired to code all the tests and clean them up for scoring. This task proved to be much bigger than was anticipated. The great majority of students took more than one instrument with some taking as many as four. By the time each test was assigned the correct student number and coded for state, grade, sex, test and age, the responses darkened where needed, smudges erased, etc., it became a sizable task. This required about two months of work and resulted in about 20,000 data cards.

The research design is described in detail in Part 2 of this report, but a brief description might be helpful here. The first part of the design was to group the items for scoring. This was done through factor analysis of the responses. These factors (groupings of items) were then conceptually analyzed by the staff to integrate empirical findings with the ideas of the staff concerning appropriate content for the various constructs. The next part of the design was to check the correlations of the items with subscores. These correlations provided evidence that the grouping procedures were adequate. It also identified those groups that were not defensible and suggested items that should be dropped or placed in another subscale grouping.

The next analysis was to estimate the reliability of the subscales. This was done with a computer program called FORTAP. The estimates ranged from zero to the high nineties, but only twelve percent or

twenty of 162 subscale reliabilities computed fell below .50. The next portion of the design moved into a more difficult area because of the amount of data available. This was the correlations of subscales across tests. Up to this point, comparisons were always within a given test meaning that a straight-forward analysis was possible. When analyzing across tests, each test-pair combination is represented by a unique configuration of students. While this analysis potentially could suggest ways for particular subscales from different tests to be combined, in many cases there were no students, or only a small number who took that particular test combination. This meant that these combinations across tests could not be calculated with enough consistency to come to any credible conclusion. This suggested a good deal of additional research. There were some subscales identified in this step that could be combined or regrouped. This is not discussed here, but pertinent data can be found in appendix E.

The final portion of the design was a correlation between the data from the findings of the Interstate Center instruments in the affective area, and the achievement data supplied by the cooperating schools. Also included was the correlation of this data with teacher observations of students. The idea of the achievement analysis was to identify any trends related to academic success and its relationship to particular subscales of the affective instruments.

These five analysis steps made up the design and provided an answer to the following questions: (1) Are the items grouped so as to measure what they purport to measure in successive administrations? (2) Is there a way to regroup the items to make the subscales better than they were when administered first? and (3) Are there consistent relationships between how students of a given academic ability answer these affective questions and their academic indicators?

#### REPORTS AND TRAINING

The last two months of the project were spent in analyzing the data, writing the reports, and preparing and conducting a training workshop for the State Department of Education personnel from each

of the member states. A part of this work was a norming run on the computer and preparing a distribution of scores on each subscale that were reported back to each participating local school on their students.

The reports are presented in four parts, each in a different colored jacket. This portion is Part 1, and describes how the project was conceived and an overview of the activities. The other parts of the report are as follows:

PART 2 - Describes the development of the affective instruments, (Orange the statistical analysis of the data collected, and gives Jacket) recommendations for use.

PART 3 - Describes the activities developed and workshop materials (Green for working with local schools to assist them in the Jacket) identification of affective goals and objectives as a basis for developing measurement instruments and Procedures.

PART 4 - Describes the search for existing instruments in the (Blue affective area, and the system for categorizing them Jacket) so as to make them more easily available. This search and the conceptual framework for categorizing were undertaken by IERSC as a support to the development of affective measurement procedures and instruments.

The training workshops were held to train personnel from the state departments of education of all eight member states, in how to use the materials developed in the project. This included procedures for working with local schools to identify and describe affective goals and objectives as well as how to use the instruments in support of instruction or for program evaluation. It is hoped that these state department staffs will continue this work with local districts and will use these materials to continue the research necessary to further refine these instruments as well as develop new ones in the affective domain.